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NELSON GOODMAN AND THE LOGICAL ARTICULATION OF NOMINAL COMPOUNDS*

ABSTRACT. Nelson Goodman claims to have given us a criterion for likeness of meaning that is more stringent than simple coextensiveness and yet that avoids the familiar extentionalist objections. The notion of a nominal compound plays a key role in his account. I show that Goodman's comments concerning this notion are inadequate, that his comments concerning expressions like 'unicorn-picture' are subject to two serious objections: (1) they don't support his claims about likeness of meaning (i.e., the claims that his criterion is more stringent than simple coextensiveness) and (2) they make English an unlearnable language.

Nelson Goodman is no friend of the lexicographer. Like Quine, he has done much to dim the contrast between synonymous and nonsynonymous expressions. However, in light or, perhaps, in spite of these clouds of doubt, Goodman claims to have provided an account of likeness of meaning that remains within the framework of extensionalism and that, at the same time, is more stringent than simple coextension. In his article 'On Likeness of Meaning', Goodman says

> I think that the difference in meaning between any two terms can be fully accounted for without introducing anything beyond terms and their extensions.[1]

According to Goodman, the difference in meaning between two coextensive terms like

(1) unicorn
(2) centaur

can be explained without appealing to notions like concepts and meanings. His strategy is to explain their differences as a difference in the extension of certain other predicates.

Specifically, Goodman's strategy is to explain the difference in meaning between extensionally identical terms as a difference in the extension of certain parallel compounds. He proceeds as follows: he first identifies the simple extension of a term, i.e., the extension of the term by itself, with what he calls *the primary extension* of the term; next he considers the extension of all of the compounds of the term and calls this *the secondary extension* of the term; finally he offers a criterion for likeness of meaning.

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* I would like to thank Nelson Goodman for his comments on an earlier draft of this paper; his comments helped me to recognize at least some of my mistakes.

[1] Nelson Goodman, 'On Likeness of Meaning', in *Problems and Projects*, The Bobbs-Merrill Company, 1972, p. 225.

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(3) Two terms have the same meaning if and only if they have the same primary and secondary extension.

This criterion is more stringent than mere coextensiveness, according to Goodman, because of the condition on the identity of secondary extensions. While terms like (1) and (2) have the same primary extension (they both designate the null class), their secondary extensions diverge. This is just to say, according to Goodman, that there are compounds of (1) and (2) that themselves differ in primary extension. The examples that Goodman uses are compounds formed from (1) and (2) by affixing expressions like '-description' and '-picture' to each of the terms. These compounds are supposed to be particularly relevant to meaning comparisons because "their extensions are not included in the extensions of the term compounded".[2] That is, compounds like

(4) unicorn-fossil
(5) centaur-fossil

will obviously not do the job, since the coextensiveness of (1) and (2) is enough to guarantee the coextensiveness of (4) and (5) and this because the extensions of (4) and (5) are included in those of (1) and (2). Compounds like

(6) unicorn-picture
(7) centaur-picture

are different however. While the extensions of (1) and (2) are null, the extensions of (6) and (7) are not. Moreover, (6) and (7) obviously differ in extension; unicorn-pictures are not centaur-pictures even though there aren't any unicorns or centaurs. This is enough to show that (1) and (2) are unlike in meaning. Two terms are unlike in meaning if they differ in secondary extension; the extension of (6) is included in the secondary extension of (1) and the extension of (7) in that of (2); since (6) and (7) differ in extension, (1) and (2) have different secondary extensions and, by Goodman's criterion, are unlike in meaning.

So much for Goodman's claim and for a sketch of his strategy. It remains to judge the adequacy of his account of likeness of meaning. It is to this that I turn in the remainder of this paper.

I

Goodman's account of likeness of meaning differs from the traditional extensionalist criterion

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[2] Nelson Goodman, *Problems and Projects*, p. 205.

(8) Two terms are alike in meaning if and only if they are alike in extension

in the introduction of the notion of the secondary extension of a term. Terms are alike in meaning, according to Goodman, when they have the same primary and secondary extensions. The secondary extension of a term is the extension of the term's compounds. In this way, Goodman invokes the notion of compounding. In fact, his criterion for likeness of meaning comes to this

(9) Two terms have the same meaning in English if and only if substitution of one for the other in each of the nominal compounds of English leaves the extension of the compound unchanged.

This way of stating the criterion has the advantage of making Goodman's dependence on the notion of a compound explicit. Terms like (1) and (2) are judged to have different meanings by (9) since they are not intersubstitutable in (6) or (7) without a change in extension. This because (6) and (7) have different extensions.

There are, however, some reasons to think that Goodman's account of likeness of meaning takes us beyond the boundaries of extensionalism. One reason becomes apparent once we consider the traditional criterion for an extensional language: a language *L* is extensional if and only if the predicates that are coextensive in *L* are intersubstitutable in the sentences of *L* *salva veritate*. Now by this criterion, a language that includes expressions like (6) and (7) among its compounds is not an extensional language. Terms (1) and (2) are coextensive, but if in (10) we substitute (2) for the first occurrence of (1), we move from truth to falsehood, since (10) is true, but (11) is obviously false.

(10) All unicorn-pictures are unicorn-pictures.
(11) All centaur-pictures are unicorn-pictures.

In short, if Goodman includes expressions like (6) and (7) among the compounds of English, then, given the traditional criterion of extensionality, Goodman's account of likeness of meaning includes expressions that exceed the boundaries of extensionality.

In *Problems and Projects*, Goodman allows as much. He concedes that expressions like (6) and (7) lie outside this boundary as it is traditionally conceived and offers the following defense:

> But I do not at all want to propose keeping within the confines of extensionality so construed. Rather, I have tried to suggest how recognition of certain contexts that are indeed non-

> extensional by this criterion nevertheless enables us to explain the difference in meaning between such words as 'centaur' and 'unicorn' without involving us in any of the more distressing aspects of intensionalism.[3]

Goodman does not go on to tell us what these more distressing aspects are, but I take this much from his comments: either he wants to advance a different criterion for the nonextensional or he wishes to accept the traditional criterion, but wishes to grade transgressions; some aspects of intensionalism are dimmer than others. His point may be this: while some of the compounds mentioned in (9) are nonextensional, the criterion only makes mention of terms and the extension of terms; no mention is made of any more exotic entities; no mention of objects like concepts or propositions. Moreover, compounds like (6) and (7) themselves make mention only of physical objects or classes of physical objects. Though these compounds may exceed the boundaries of extensionalism, they are not so distressing as the following expressions:

(12) unicorn-concept
(13) centaur-concept

These last expressions, if they designate anything at all, designate entities that are notoriously obscure. If one were to try to establish the difference in meaning between (1) and (2) by applying the criterion, i.e., (9), to (12) or (13), his account of likeness of meaning would be dim. But in applying the criterion to expressions like (6) and (7) we skirt whatever is recondite or obscure. This seems to be Goodman's point when he says

> The paramount problem is to deal with comparisons of meaning without reference to intensions, attitudes or modalities. The proposed criterion in terms of primary and secondary extensions meets this requirement.[4]
>
> Let us, in order to avoid entanglement with such terms as 'thought of . . .', 'concept of . . .', 'attribute of . . .', and 'meaning of . . .' exclude from consideration all predicates that apply to anything but physical things, classes of these, classes of classes, etc.[5]

In short, as I understand Goodman's view, the distressing aspects of intensionalism are its ontological aspects. Compounds like (6) and (7) are presumably on a par with (12) and (13) if we only consider the logical form of these expressions: we can't substitute a coextensive term for 'unicorn' or 'centaur' in any one of them without shifting the extension of the whole. On Goodman's view, accounts of likeness of meaning are to be admonished more for their departures from a conservative metaphysical view, from nominalism, than for their departures from a conservative logical view, i.e., from the theory of extensions.

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[3] *Ibid.*, p. 222.
[4] *Ibid.*, p. 233.
[5] *Ibid.*, p. 227.

This suggests, however, that the two are quite separate, that, for example, we can come to understand expressions like (6) and (7) and to understand the notion of a nominal compound without having committed ourselves to any abstract entities. We have seen that Goodman's account of likeness of meaning depends heavily on the notion of a nominal compound. Before we can understand, let alone judge the adequacy of his criterion, we have to understand this notion. We would like to assure ourselves, for example, that an account of English compounding won't itself include reference to abstract entities. On the other hand, we would like to assure ourselves that expressions like (6) and (7) are in fact compounds as Goodman claims. If they turn out not to be, then Goodman will have failed to give us an account of likeness of meaning that is more stringent than mere coextensiveness.

II

Goodman's first words about the notion of a compound are rough: "A compound is a larger term obtained by adding other words".[6] Later, he tells us that the compounds he is interested in, those like (6) and (7), are composed by making identical additions to two English words that are alike in (primary) extension.[7] These comments, of course, will not do. One does not form compounds in English merely by adding words to words. In most cases, the result of stringing words together isn't a word at all and, when a word, seldom a compound word, e.g., 'baggage.' Expressions like

(14) detergent
(15) determine

are composed by making identical additions to 'gent' and to 'mine' and yet (14) and (15) are not compounds of 'gent' or of 'mine' and they tell us nothing about the secondary extensions of these terms. It would be otiose to claim that 'gent' and 'mine' are unlike in meaning because (14) and (15) are unalike in extension. Goodman's few comments about the notion of compounds will simply not do.

As the notion is ordinarily understood, a compound term is a term that contains some meaningful parts. That is, it is a term which is composed of parts that contribute to the meaning of the whole. If the notion of meaning is too obscure, the same point can be made from the bounds of the theory of reference: a compound term is a term whose extension is determined by the extension of its parts. I call this deceptively simple principle *The Semantic Principle of Compounds.* We allow, for example, that 'girlfriend' is a compound term and we allow this, at least in part, because we recognize that the extension of 'girl' and the extension of 'friend' contribute to the extension of 'girlfriend' and to the truth or falsity of

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[6] *Ibid.*, p. 205.
[7] *Ibid.*, p. 232.

(16) John has a girlfriend.[8]

On the other hand, we are unwilling to allow that the term 'baggage' is a compound term in English and this, at least in part, because we recognize that 'gage' contributes nothing to the extension of 'baggage' or to the truth or falsity of

(17) John stole Bill's baggage.

It is interesting to see what happens when we apply this principle to expressions like (6) and (7), to Goodman-type compounds. According to the Semantic Principle of Compounds, 'unicorn-picture' is a compound of 'unicorn' only if the extension of 'unicorn' and the extension of 'picture' both contribute to the extension of 'unicorn-picture'. At first sight, at least, this doesn't seem to be so. The following argument seems quite telling: if 'unicorn-picture' was a compound of 'unicorn', then 'unicorn-picture' and 'centaur-picture' would have the same extension, since they differ only with respect to 'unicorn' and 'centaur' and the extension of these terms is the same, *viz*. null; but, of course, 'unicorn-picture' and 'centaur-picture' have different extensions. Given the Semantic Principle of Compounds, we can maintain that (6) and (7) are compounds in English, are compounds of 'unicorn' and of 'centaur' only if we allow that, as they occur in (6) and (7), 'unicorn' and 'centaur' have different extensions. This is Frege's way out.

According to Frege, 'unicorn' and 'centaur' (and every other term for that matter) are ambiguous; their extension may change from one occurrence to the next. This change is a function of context. In most contexts 'unicorn' and 'centaur' have the same extension, they have the extension that Goodman identifies with their primary extension, *viz*. the null set. Frege would call this their customary extension. However in oblique contexts, i.e., within belief contexts and within Goodman-type compounds, they have a different extension; here the extension of 'unicorn' and 'centaur' is the same as the customary sense. Since these terms have different customary senses, in (6) and (7), they have different extensions. The Semantic Principle of Compounds holds; it is just that the extension of (6) is a function of the customary extension of 'picture' and the oblique extension, i.e., the customary sense, of 'unicorn'.

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[8] I use 'girlfriend' here in the sense of 'girl who is a friend' and ignore the fact that the term is sometimes used in a way that leaves friendship out of the picture almost entirely.

Goodman, of course, will take no comfort in Frege's way out. Frege knowingly adopted the distressing aspects of intensionalism. In oblique contexts, terms apply to their customary senses and these are abstract objects, objects too recondite for Goodman to uphold.

III

In section I, I suggested that Goodman's criterion for likeness of meaning can be viewed as a substitutional criterion: we substitute terms for terms in nominal compounds and check to see if the extension is saved. I also suggested that, as it is ordinarily understood, the notion of a compound is a semantical notion, that compound nouns are nouns whose meanings are determined by the meanings of their meaningful parts. This, however, led us to a dilemma: either Goodman-type compounds are not compounds after all or they are compounds parts of which, at least, apply to abstract objects. Obviously, Goodman is not going to stand still for this. It remains, however, to estimate his reply.

Goodman's comments on the nature of compounds come in small patches and are spread out over a number of years of writing and research. I have already reported his remarks in 'On Likeness of Meaning' and, as we saw, they are rough and incomplete. The question is taken up again, however, in his book *Languages of Art*[9] and in two papers, the first entitled 'About'[10] and the second 'Some Notes on *Languages of Art*'.[11] In his paper 'About', Goodman speaks of ways in which one term may contain another, ways in which one may occur in another. A term may have an accidental occurrence within another expression or it may have a non-accidental occurrence. According to Goodman, a term occurs accidentally when it occurs as a mere accident of orthography. Presumably the occurrence of 'vine' in 'bovine' and of 'gent' in 'detergent' are accidental occurrences. However, some of Goodman's comments suggest that the occurrence of 'unicorn' in 'unicorn-picture' is an accidental occurrence as well. Goodman calls our attention to the sentence

(18) The frontispiece is a picture of Pickwick.

and tells us, for example, that this sentence

> ... says in effect that the frontispiece is a Pickwick-picture; the 'Pickwick' occurs here as an inseparable part of a longer predicate and can no more be treated as an independently designating term than can one of its syllables or letters.[12]

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[9] Nelson Goodman, *Languages of Art*, Bobbs-Merrill, 1968.

[10] Nelson Goodman, *Problems and Projects*, pp. 246–272.

[11] *Ibid.*, pp. 122–132.

[12] *Ibid.*, p. 266.

Goodman says of 'Pickwick' in 'Pickwick-picture' and of other expressions when they occur in the context '. . . -picture' that, when these terms occur in this context, they do not occur as 'genuine terms'. To this extent, at least, he assimilates occurrences of terms in the context '. . . -picture' to occurrences of terms within quotation marks and as parts of words. The term 'ant' does not occur as a genuine term in "ant" or in 'antrum', but, then, neither does 'unicorn' in 'unicorn-picture'. To this extent, the occurrences are on a par. In neither case, if I understand Goodman's comments, can we reach inside the containing expression and quantify over any of its parts. Sentence (19) does not follow from (18) any more than (20) follows from (21).

(19) $(\exists x)$ (the frontispiece is a picture of x).
(20) Rita loves rosemary.
(21) $(\exists x)$ (x is rose and Rita loves x).

Existential generalization is not a valid mode of inference with respect to 'unicorn' in 'unicorn-picture' any more than it is with respect to 'mary' in 'rosemary' or 'ant' in "ant". Here we have a criterion for the distinction between an accidental and a non-accidental occurrence of an expression: an expression, E, has a non-accidental occurrence with respect to its occurrence in an expression, T, if and only if existential generalization is a valid mode of inference with respect to E in T. This seems to be just Goodman's point when he says in a footnote in his paper 'About',

> *Occurrence as a term* and *designation* are related in the following way: If E occurs as a term of S, and if the result of putting an appropriate variable for E in S and prefixing an existential quantifier governing that variable is a statement that follows from S, then E designates in S.[13]

Designation is just non-accidental occurrence. The upshot of Goodman's discussion of compounds in 'About' seems to be this: Terms which occur within Goodman-type compounds occur there accidentally and do not designate.[14]

How, then, can Goodman make out his claims that (a) 'unicorn-picture' is a compound of 'unicorn' and (b) the primary extension of 'unicorn-picture' is included in the secondary extension of 'unicorn'? If 'unicorn' occurs accidentally and does not designate in 'unicorn-picture', then, given the Semantic Principle of Compounds, 'unicorn-picture' is not a compound; but if 'unicorn-picture' is not a compound, then the primary extension of 'unicorn-picture' is not included in the secondary extension of 'unicorn'.

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[13] *Ibid.*, p. 267.

[14] On this way of speaking, 'unicorn' in 'I shot a unicorn' *designates* but it does not designate any flesh and blood thing, i.e., it designates the null class.

Let me put the puzzle another way. According to Goodman's criterion for likeness of meaning, what I describe above in (3), the difference in meaning between two coextensive terms is to be explained by a difference in extension of two other terms. At first sight, this seems to be absurd. How can the difference in meaning between two terms be explained by a difference in extension of terms that are different? We certainly wouldn't say that the difference in meaning between 'unicorn' and 'centaur' can be explained by the difference in extension between 'horse' and 'bovine'. The fact that 'horse' and 'bovine' have different extensions is not relevant to the question of the likeness or difference in meaning between 'unicorn' and 'centaur'. If the difference in meaning between two terms *A* and *B* is to be explained by the difference in extension of two other terms *C* and *D*, then *C* and *D* will have to be related to *A* and *B* in some intimate way. In what way? Since it is likeness in meaning that we are interested in, we would expect that the intimate relation between *A* and *B* and *C* and *D* would have to be a semantical relation; we might expect the meaning of *A* to contribute to the meaning of *C*, for example, and the meaning of *B* to *D*. In saying that 'unicorn' and 'centaur' don't designate in 'unicorn-picture' and 'centaur-picture' (that they occur accidentally), Goodman denies just what he needs to assert; he denies that 'unicorn' and 'centaur' are semantically connected to 'unicorn-picture' and 'centaur-picture'. As a result, he gives up the only plausible reason he has for saying that a difference in the extension of 'unicorn-picture' and 'centaur-picture' indicates or explains something about the meaning of 'unicorn' or 'centaur'.

IV

Goodman offers a way out of the puzzle in his paper 'Some Notes on *Languages of Art*'. He writes:

> . . . by describing a predicate like 'is a unicorn-picture' as an unbreakable one-place predicate, I meant to preclude treating it as a two-place predicate and thus to block the fallacious inference from '*p* is a unicorn-picture' to 'there is something that *p* is a picture of'. I did not mean to restrict our freedom to treat such predicates as conjunctive; we may, for example, construe '*P* is a unicorn-picture' as elliptical for '*p* is a picture, and *p* is of-a-unicorn' . . . Since such predicate-splitting is not prohibited, the epithet 'unbreakable' – intended merely to reinforce 'one-place' – is misleading and should be omitted.[15]

The point, I take it, is that, first appearances and misleading comments notwithstanding, Goodman-type compounds are compounds after all. In accordance with the Semantic Principle of Compounds, (6) and (7) are compounds in English; they just aren't the compounds that we thought they were. Nouns like 'grave-robber', 'chicken-plucker' and 'dog-trainer' are, of course, compounds in English and we may try to understand Goodman-type compounds with their examples before us. But this would be wrong. It is safe to say that x is a dog-trainer if and only if there is a y and y is a dog and x trains y, but, according to Goodman, we bark up the wrong tree when we fit this paraphrase on to words like 'unicorn-picture'. The predicates from which 'unicorn-picture' grows are not 'is a picture of' and 'is a unicorn' but 'is a picture' and 'of-a-unicorn'.

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[15] Nelson Goodman, *Problems and Projects*, p. 122.

Among the things that are of-a-unicorn are stories, poems, descriptions, sculptures, tapestries and jokes. Unicorn-pictures are of-a-unicorn but then so are the royal arms of Great Britain and Scotland and so is Odell Shepard's book *The Lore of the Unicorn*. Sentence (18) is true if and only if the frontispiece is a picture and is of-a-unicorn. So understood, (19) is not a consequence of (18). On the other hand, so understood, 'unicorn-picture' is a compound noun in English. This, in brief, is Goodman's way out.

While I admire the effort, it is fairly obvious, I think, that this bit of sleight of hand will not meet our original objections. Suppose we follow Goodman and construe 'unicorn-picture' as elliptical for

(22) is a picture and is of-a-unicorn.

There is no doubt that, on this construal, 'unicorn-picture' is a compound of 'unicorn'.

The first thing to note, is that given the criterion for accidental occurrence, 'unicorn' has an accidental occurrence in (22). Existential generalization is not a valid mode of inference with respect to 'unicorn' in (22). Sentence (24) is obviously not a consequence of (23)

(23) This frontispiece is a picture and is of-a-unicorn.
(24) $(\exists x)$ (this frontispiece is a picture and is of x)

In the case of 'of-a-unicorn', predicate-splitting is prohibited. Here the epithet 'unbreakable' is fitting.

But, if the occurrence of 'unicorn' in (22) is an accidental occurrence, then how can (22) be a compound of 'unicorn'? Consider the Semantic Principle of Compounds or, more to the point, the following corollary: an expression C is a compound of an expression E only if the extension of E contributes to the extension of C. The term 'girlfriend', one of our earlier examples, is a compound of 'friend' because the extension of 'friend' at least partially determines and, as a result, contributes to the extension of 'girlfriend'. If 'unicorn' occurs accidentally and does not designate in (22), then it does not contribute to the meaning of this expression. The term 'of-a-unicorn', on the other hand, does contribute to the meaning (extension) of (22) and, as a result, (22) is without doubt an English compound. But 'unicorn' is not 'of-a-unicorn'; however common the orthography, these two terms are not kin – they are as 'gage' is to 'baggage' or 'mary' to 'rosemary'. While 'carryon-baggage' is a compound, a compound of 'baggage,' 'carryon-baggage' is not a compound of 'gage'. What the example shows, in any case, should be pretty obvious: an expression *E* may be a compound and *E* may contain another expression *T* and yet *E* may not be a compound of *T*. Not just any containment will do. *T* must have a non-accidental occurrence in *E*. But, given this requirement, 'unicorn-picture', on Goodman's construal, is not a compound of 'unicorn'.

If, contrary to fact, expressions like 'of-a-unicorn' and 'of-a-centaur' could be split, then there would not even be any need for Goodman-type compounds. If 'unicorn' and 'centaur' occurred non-accidentally in these expressions, then 'of-a-unicorn' and 'of-a-centaur' would be compounds of 'unicorn' and 'centaur'. But if this were so, then the fact that 'of-a-unicorn' and 'of-a-centaur' have different primary extensions would be enough to make Goodman's case, then, 'unicorn' and 'centaur' would be shown to differ in secondary extension. But 'of-a-unicorn' and 'of-a-centaur' are semantically simple, and, as a result, if Goodman-type compounds are compounds on Goodman's construal, they aren't the compounds they need to be.

Where does this leave us? Goodman has managed to offer us a compound but not a compound of 'unicorn'. The same comments apply to Goodman's other favored terms, e.g., 'centaur-description', as well. On Goodman's construal we will have a compound, but not a compound of 'centaur'. And if 'unicorn-picture' and 'centaur-picture' are not compounds of 'unicorn' and 'centaur', then the fact that these compounds differ in primary extension tells us nothing about the secondary extension of 'unicorn' or 'centaur'. The fact that 'is a picture and is of-a-unicorn' and 'is a picture and is of-a-centaur' differ in primary extension gives us no more reason to say that 'unicorn' and 'centaur' are unalike in meaning than the fact that 'detergent' and 'determine' differ in meaning does for saying that 'gent' and 'mine' are unalike in meaning. Or to put the matter another way: on Goodman's construal of 'unicorn-picture', this Goodman-type compound contributes no more to the secondary extension of 'unicorn' than 'carryon-baggage' contributes to the secondary extension of 'gage'. Of course, if Goodman-type compounds do not contribute to the secondary extensions of terms like 'unicorn' and 'centaur', then Goodman has given us no reason to say that these terms are unalike in meaning. In turn, Goodman has failed to show us that his criterion for likeness of meaning is more stringent than simple coextensiveness.

V

Goodman's construals of compounds like 'unicorn-description' and 'unicorn-picture' do not support his claims about likeness of meaning, but might they not be of some interest in their own right? After all, anything we learn about the grammar of English compounds is a step in some right direction. Unfortunately, Goodman does not have anything to teach us here either.

Goodman's construal of 'unicorn-picture' displays no principle that will aid us in construing other apparently related compounds. Consider an example. Suppose I paint a picture of a unicorn and you paint a picture of my picture. We have a term for your effort, *viz.* 'a unicorn-picture-picture'. But how is this term to be construed? If we follow Goodman's advice, we can do no better than 'is a picture and is of-a-unicorn-picture'. The more revealing is 'a picture and is of-a-picture and is of-a-unicorn' won't do because on this construal (25) we will entail (26)

(25) This is a unicorn-picture-picture.
(26) This is a unicorn-picture.

But surely you may paint a unicorn-picture-picture that is not a unicorn-picture. A dramatic example: the unicorn-picture in your unicorn-picture-picture is draped with a cloth; only the title-plate shows.

Goodman's construal of Goodman-type compounds will leave little room for predicate-splitting. While we may embed 'picture' within 'picture', only the last occurrence of 'picture' will be unbreakable, only the last occurrence will designate. As a result, on Goodman's construal of Goodman-type compounds, the compounds are unlearnable.

The argument for this is as follows. However we proceed to define the notion of a compound, we will have to proceed recursively; for presumably there are infinitely many of these expressions in English. Given 'unicorn-picture', for example, we can construct another Goodman-type compound by suffixing '-picture' to this term: 'unicorn-picture-picture' is presumably as much a compound noun of English as is 'unicorn-picture'. In general, given any Goodman-type compound of length n letters, we can construct a new compound that is the length of '-picture' longer.

According to a proposal by Donald Davidson,[16] a necessary feature of a learnable language is that it be possible to give a constructive account of the meaning of the sentences of the language. This requires that the language contain only a finite number of semantically primitive expressions. According to Davidson, an expression *E* is semantically primitive if and only if the rules that give the truth conditions for sentences in which *E* does not occur do not suffice to determine the truth conditions of sentences in which it does appear. By this criterion, the expressions that fill the lacuna '...-picture' are each semantically primitive; on Goodman's account of these expressions, the truth conditions of a sentence like (25) are not determined by rules that give the truth conditions for (26) and the truth conditions of a sentence like (27)

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[16] Donald Davidson, 'Theories of Meaning and Learnable Languages', in *Proceedings of the 1964 International Congress for Logic, Methodology and the Philosophy of Science*, North-Holland, pp. 383–95.

(27) This is a unicorn-picture-picture-picture.

are not determined by the rules that give the truth conditions of (25). In each case, the terms that precede '-picture' in '...-picture' are semantically indissoluble wholes. If terms occur within these terms, they occur accidentally and have no designative function. Since there are infinitely many terms that can fill this lacuna, and, as a result, infinitely many Goodman-type compounds, a language that contains these compounds must contain infinitely many semantically primitive expressions. But given Davidson's proposal, this language is an unlearnable one. Since Goodman's compounds are supposedly among the compounds of English, on Goodman's construal of Goodman-type compounds, English is an unlearnable language. This, of course, is a chilling thought to those of us who think we have learned the language.

VI. CONCLUSION

Goodman claims to have given us a criterion for likeness of meaning that is more stringent than simple coextensiveness and yet that avoids the familiar extentionalist objections. Though the notion of a nominal compound plays a key role in his account, I have shown that Goodman's comments concerning this notion are inadequate, that his comments concerning expressions like 'unicorn-picture' are subject to two serious objections: (1) they don't support his claims about likeness of meaning (i.e., the claims that his criterion is more stringent than simple coextensiveness) and (2) they make English an unlearnable language. However much we might appreciate Goodman's cleverness and ingenuity, his discussions of likeness of meaning have advanced matters of meaning little if at all.

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